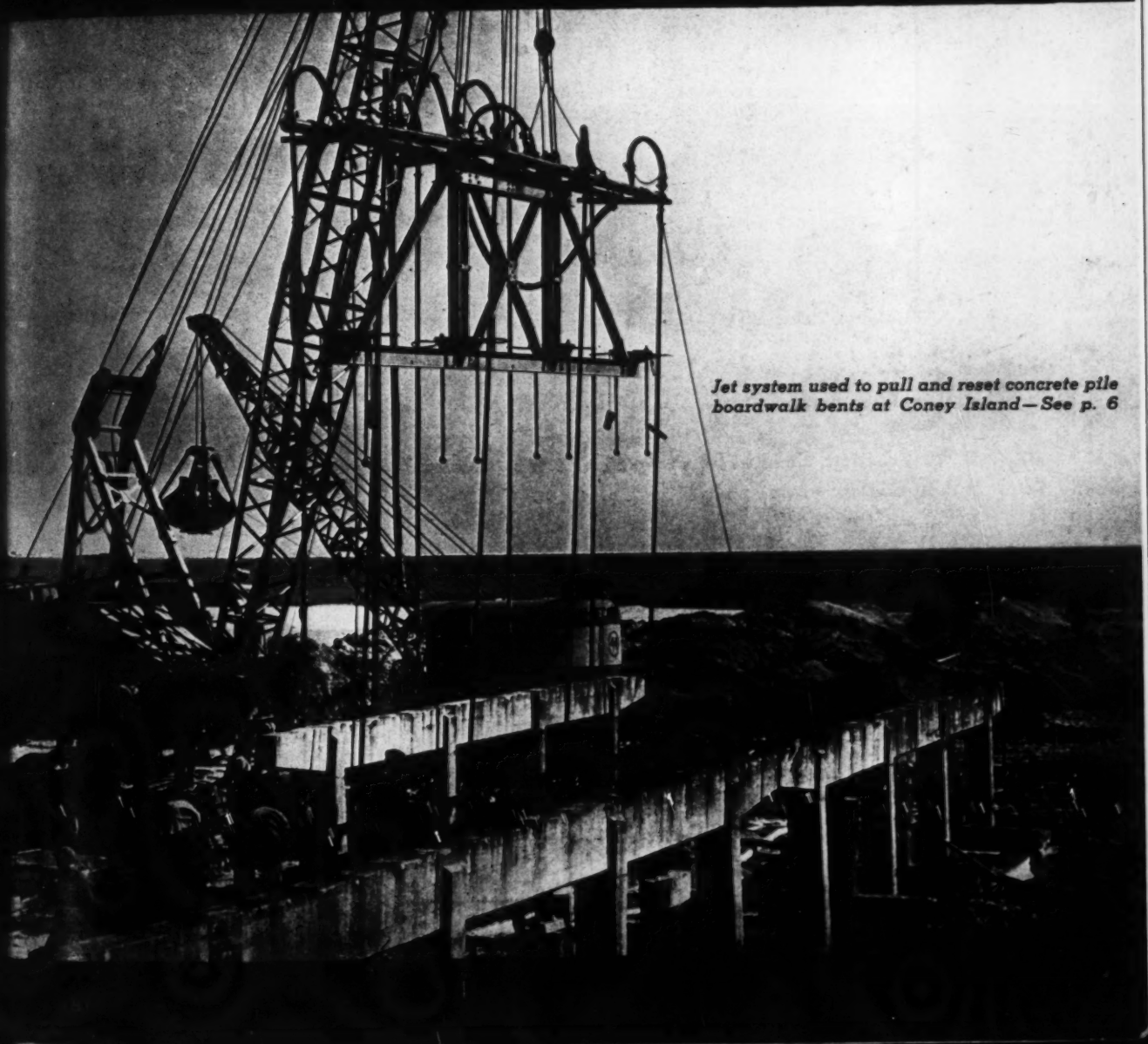
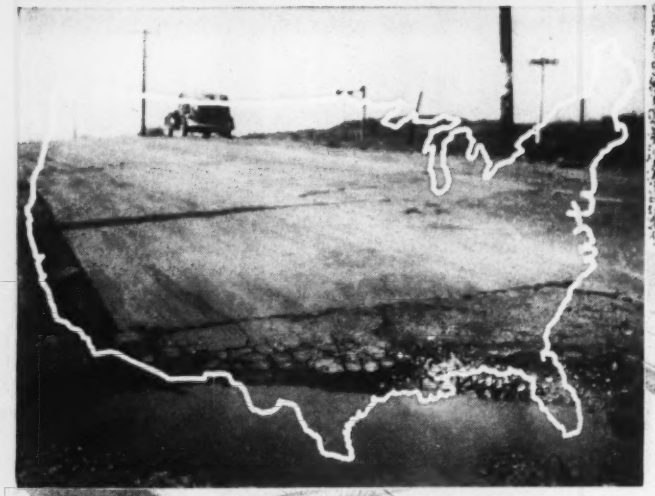
# NEWS



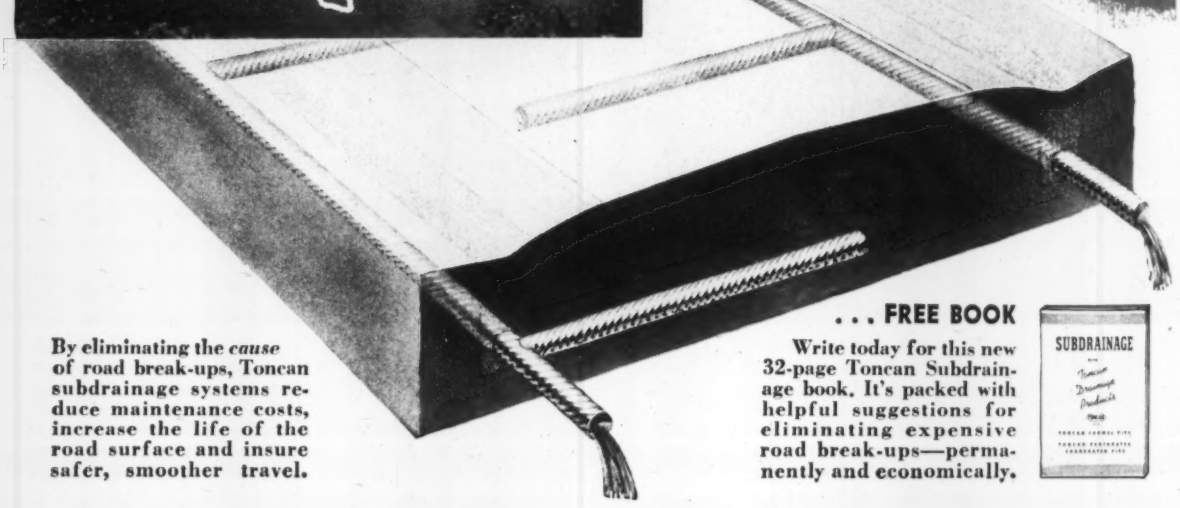
*Jet system used to pull and reset concrete pile boardwalk bents at Coney Island—See p. 6*

# "POP" GO THE HIGHWAYS!



**STOP** THE TROUBLE WITH TONCAN SUBDRAINAGE PIPE

When roads heave, break and go to pieces, it's usually due to water trapped in the subgrade. So the only *lasting* cure is to drain the water out and keep it out—with Toncan perforated metal pipe.



By eliminating the *cause* of road break-ups, Toncan subdrainage systems reduce maintenance costs, increase the life of the road surface and insure safer, smoother travel.

**. . . FREE BOOK**

Write today for this new 32-page Toncan Subdrainage book. It's packed with helpful suggestions for eliminating expensive road break-ups—permanently and economically.




● Frost damage alone will cost the American public *millions* of dollars *again* this year . . . proof that treating the surface never can overcome effects of a wet, poorly drained subgrade.

To stop excessive maintenance, troublesome "soft spots" must be *permanently* stabilized. And to do this job successfully, you need Toncan perforated metal pipe. *First* because it collects and removes seepage water efficiently, without becoming clogged with silt or roots. *Second* because it stands up under heavy loads and soft, shifting soils, without breaking or getting "out of line."

Toncan perforated pipe is quickly available in various diameters and gages—with strong, easily attached couplings. Lengths up to 24 feet. Write us today. Toncan Culvert Mfrs. Association, Republic Bldg., Cleveland, Ohio.

**SPECIFY TONCAN IRON**

*Twice* as much copper PLUS molybdenum for *LONGER* service

PRODUCT OF REPUBLIC STEEL

ENGINEERING NEWS-RECORD

# NEWS

Volume 124 MAY 2, 1940 Number 18

## NOTES ON THE NEWS

*Quick Surveys of Construction Events*

▶Largest group of waterworks men ever assembled met last week in Kansas City for the 60th annual meeting of the American Water Works Association. They heard for the first time that the U. S. Public Health Service is drafting a code of waterworks practice.

▶The Williamson bill which would have permitted collection of tolls on the Hutchinson River and Sawmill River parkways in Westchester County, N. Y., was vetoed April 26 by Gov. Lehman.

▶The U. S. Supreme Court this week upheld the right of the Secretary of Labor to interpret the word "locality" in the Walsh-Healey Act as covering an area as large as one sixth of the United States. The court's decision applied to wages in the steel industry but it is significant for the construction industry as indicating that similar reasoning may be applied in determining the area in which a specified prevailing wage applies.

▶Road appropriations for 1942 and 1943 in a bill being considered by the House of Representatives this week are a third greater than those for the coming fiscal year.

▶Some fast records are being made on driving operations for the Carlton Tunnel in Colorado and those for New York City's Delaware Aqueduct, see page 3.

▶Emphatic opposition to government ownership of railroads was expressed in Washington last week by Assistant Secretary of War Johnson. In this he disagrees with William J. Wilgus (*ENR*, April 4, p. 473) in his thesis that the only way to get the railroads back on their feet is for the government to take them over.

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*Cover photo by Wurgel*

# *Waterworks Men Are Told That Federal Regulations Are Pending*

**American Water Works Association meeting in Kansas City smashes all previous records in attendance and exhibits. Manufacturer groups move to include exhibitors of sewage works equipment**

Appropriately timed to reach the ears of the largest gathering of waterworks men ever assembled at a national meeting, was a statement by Paul V. McNutt, Federal Security Administrator, that new regulations embodying a code of waterworks practice are in the making. Speaking before the 60th annual convention of the American Water Works Association, he said that the U. S. Public Health Service—oldest of the agencies incorporated in the recently established Federal Security Agency—is studying the sanitary control of drinking water. Present standards, first promulgated in 1914 and revised in 1925, will give way within the next two years to new regulations, he announced.

The four day meeting of the association, held in Kansas City, April 21-25

(*Continued on p. 5*)

*Kansas City Times Photo*

**PUBLISHER, ADMINISTRATOR AND MANUFACTURER TALK IT OVER**

TIP-OFF to waterworks men that new federal regulations embodying a code of practice are being formulated was given by Paul V. McNutt (center), administrator, Federal Security Agency, at the A.W.W.A. meeting last week. At the left is Willard Chevalier, vice president, McGraw-Hill Publishing Co., and at the right is W. F. Rockwell, head of the Pittsburgh Equitable Meter Co., retiring president of the Water Works Manufacturers Association.

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## *New York Governor Vetoes Parkway Toll Bill*

Governor Lehman of New York state on April 26 vetoed the Williamson bill which would have permitted Westchester County to charge tolls on the Hutchinson River and Sawmill River parkways by establishing a Westchester Parkway Authority. In vetoing the measure Gov. Lehman stated, "In my opinion it is an unsound practice to impose tolls on roads and parkways. There is substantial distinction between that and imposing a toll for a new bridge or tunnel. Were I to sign this bill, I feel that it would create a precedent which would open up the way to the passage of legislation authorizing the imposition of tolls on highways and parkways throughout the state.

"We cannot afford to overlook the long-range disastrous results of charging tolls on our roads. Both from a state and national point of view we cannot afford the retrogress to conditions prevailing in this country a century ago."

In vetoing the measure Gov. Lehman made known that the Public Roads Administration had objected to the bill because $2,000,000 of federal-aid highway funds had been expended on the two roads under the federal highway act of 1921.

This veto does not affect the charging of tolls on the Fleetwood Viaduct of the Cross County Parkway as provision for tolls on that structure was made in a separate act.

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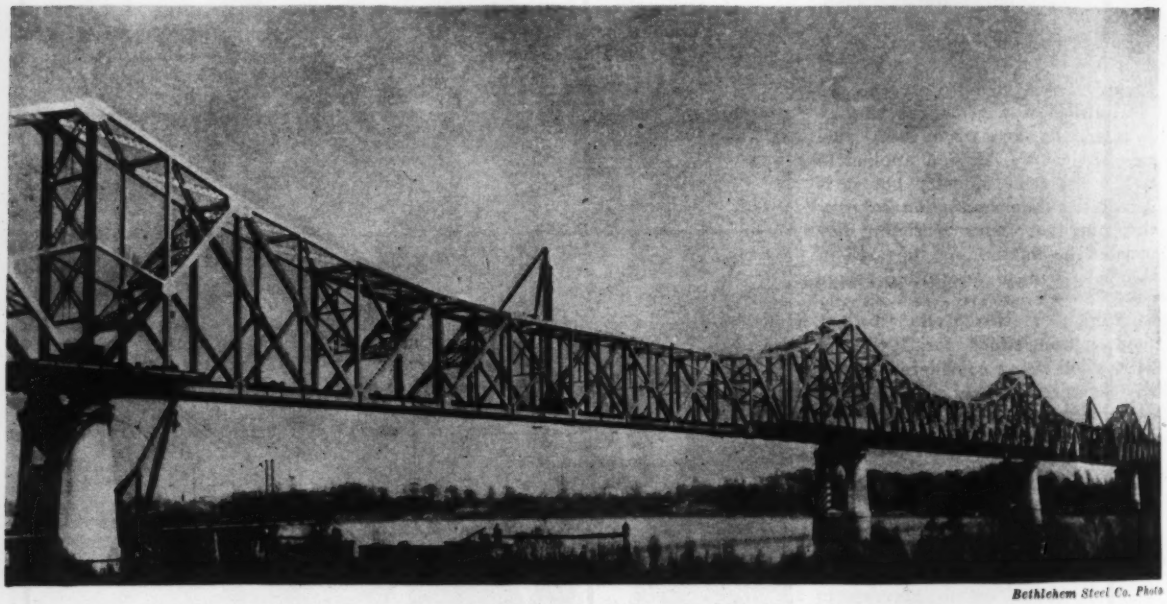
## *Colorado Road Budget Signed After Long Delay*

Colorado's highway budget, allocating $7,116,000 for the various operations of the state highway department in 1940, was signed by Governor Carr last month. The budget was submitted to Carr Dec. 13 by State Highway Engineer C. D. Vail.

The budget includes $3,842,000 for construction and improvement of highways; $1,000,000 for oiling of federal aid highways, with or without federal aid participation; $1,500,000 for maintenance and maintenance equipment; $300,000 for highway patrol, and $273,000 for administration of the highway department.



*Bethlehem Steel Co. Photo*

**MISSISSIPPI BRIDGE AT BATON ROUGE NEARS COMPLETION**

ERECTION of the main trusses of a bridge to span the Mississippi River at Baton Rouge has been completed and construction begun to provide for two 22-ft. roadways supported on brackets outside of the trusses. The space between the trusses, which is 32 ft. wide, will eventually be occupied by two railroad tracks, although for the present only one set of tracks will be installed. This arrangement eliminates heavy cross bracing and separates railway and highway traffic.

Overall length of the crossing is 3,326 ft. The central span is 650 ft., the two adjoining spans 858 ft., and the two shore anchor spans 490 ft. The project, costing $8,500,000, is being built by the Louisiana State Highway Commission. H. D. Henderlite is chief engineer for the commission; N. E. Lant, bridge engineer, and E. L. Erickson, construction engineer for the project. Harrington & Cortelyou, Kansas City, Mo., are the consulting engineers. Contract for the steel work is held by the Bethlehem Steel Co.; Kansas City Bridge Co. built the main river piers; Uvalde Construction Co. constructed the approach foundations, and the Steel Construction co. did the approach superstructure work.

*Thos. J. Barbre Photo*

**John R. Austin, superintendent, and A. H. Beebe, manager of mining, Golden Cycle Corp., who are holding down the Western front in the tunnel driving war between Colorado's Carlton Drainage Tunnel and New York's Delaware River Aqueduct.**

## *New Driving Records On Rival Tunnels*

On battlefronts more than 2,000 miles apart, the tunnel driving war between the Carlton Drainage Tunnel at Cripple Creek, Colo., and the Delaware Aqueduct Tunnel in New York wages hotter than ever. The boys at Carlton have but one gun to fire—a single 8x9-ft. heading driven from a portal—while the Delaware tunnelers can train the records of several heading on their Rocky Mountain rivals, though they are handicapped by shaft hoisting.

In a 31-day period ending in February, Walsh Const. Co. set a record of 1,619 ft. advance of a single heading at Shaft 4 on the Delaware Aqueduct. During a similar period in March, the Carlton heading was driven 1,735 ft. Alex Simpson, superintendent for Walsh at Shaft 5 now informs us that in the 31 working days from Feb. 1 to Mar. 9 a progress of 1,862 ft. was made in the north heading of his job, an average of 60 ft. per day. This heading is about 17 ft. excavated diameter; part of the time driving was through popping sandstone that required timbering and driving by crown-bars.

John R. Austin, superintendent at Carlton Tunnel, heard about the above record, and writes that if we want to consider a "selected" period, take a look at his progress for the 31 days ending Apr. 9. He chalked up 1,879 ft. advanced for that period, with a maximum daily drive of 74 ft.

In the meantime Fred Stiefel, chief enigneer, and Walter Dunham, superintendent at Shaft 3 on the Delaware Aqueduct for Samuel R. Rosoff, Ltd., have been doing some fast driving under difficult conditions. In the 27 working days ending Apr. 20, the north heading at Shaft 3 was advanced 1,076 ft.; the south heading 1,180 ft. Both headings, 17 ft. diameter, are in bad ground requiring timber carried to the face and crown bar driving methods. Also, the presence of methane gas adds to tunneling difficulties.

The confused tunnel editor, dizzy with trying to keep these records straight, hopes that somebody holes through someplace someday soon to ease the strain.

## *Large Highway Bill Before House*

**Appropriations for 1942 and 1943 may be third larger than for coming year**

Road appropriations for the fiscal years 1942 and 1943 are about a third larger than the amounts authorized for the coming fiscal year in a highway bill reported out this week by the roads committee of the House of Representatives. Returning to the figures used in the 1936 authorization act, the bill would authorize for each year federal aid to primary roads of $125,000,000, to secondary roads $25,000,000 and to grade crossing elimination $50,000,000. For parkways $10,000,000 would be authorized, for roads in public lands $2,500,000, in national parks $7,500,000, and in Indian reservation $4,000,000.

As introduced, the bill had contained a novel section, Title II, which would have carried out the recommendations of the Public Roads Administration's report entitled "Toll Roads and Free Roads" by making available to local bodies loans at very favorable terms for purchase of right-of-way. The committee dropped this section and substituted a provision authorizing the RFC to make right-of-way loans and providing that the loans might be made against highway taxes.

Another new section authorizes the purchase of extra right-of-way along federal-aid highways to preserve natural beauties and provide "recreational areas of limited size." Five per cent of a state's federal aid allotment may be used without matching for this purpose.

The "Arkansas clause," which permits a state using 90 per cent of its road tax money for highways but still unable to match its federal aid allotment to have the money without matching, is modified in this bill to require that the unmatched money be spent on roads of military importance.

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## *Rust Engineering Bids Low For Birmingham Housing*

The Rust Engineering Co., Birmingham, was the low bidder Apr. 25 when bids were opened for the Southtown low-rent housing project for Negroes at Birmingham, Ala., with a bid of $1,231,000. Closely following Rust was Algernon Blair of Montgomery with a figure of $1,232,000; Daniel Construction Co., Birmingham, bid $1,234,000.

Southtown will have 58 buildings on 19 acres to house about 1,500 negroes in 460 units.

## WHAT THEY SAID WAS IMPORTANT TO THE WATERWORKS INDUSTRY

WINNERS of the Goodell Prize which is awarded each year to the author of the outstanding paper given before the American Water Works Association. The men shown are those who received the cash award since 1931 when the John M. Goodell Prize was inaugurated by *Engineering News-Record* in memory of a former editor.

**Looking, learning and buying at the Waterworks Show in Kansas City. About 100 manufacturers displayed equipment in the biggest exhibit of its kind ever held. It was reported that order-taking exceeded all expectations.**

# *Waterworks Meeting*

*(Continued from p. 1)*

produced a paid registration of 1,468. This exceeded the all-time high record of 1,290 set at Atlantic City last year. Next year the convention will be held in Toronto.

### *Manufacturers' activities*

About 100 manufacturers displayed equipment in the spacious exhibit arena of the Municipal Auditorium, showplace of Kansas City. Under the chairmanship of J. Herman Smith, sales engineer of the Hersey Mfg. Co., the exhibitors produced a show in which color, light, photography and animated displays were effectively used to dramatize the water service industry.

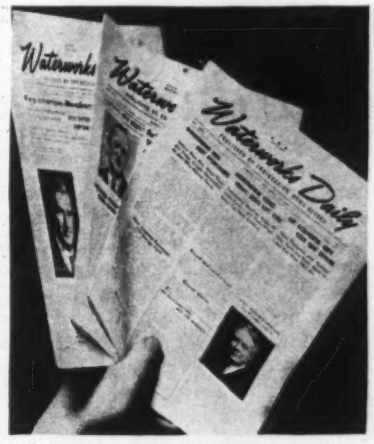
An important move was made by the Water Works Manufacturers Association when authority was voted to revise the constitution to include exhibitors at sewage works association meetings. Also, approval was given for an expenditure up to $5,000 to be used in connection with the first national convention of the Federation of Sewage Works Associations to be held in Chicago on Oct. 3-5. Elected to the presidency of the manufacturers association was Karl M. Mann, president of the Case-Sheppard-Mann Publishing Co.

### *Howard is president*

Norman J. Howard, director of water purification, Toronto, Ont., was elected president of the A.W.W.A. to succeed J. Arthur Jensen of Minneapolis. In a statement to *Engineering News-Record* Howard said:

"At no time in the history of the organization has A.W.W.A. made greater headway than during the past year. Conditions were never better for further increase in membership and for greatly increased expansion. Participation and cooperation with other organizations have greatly enhanced both the national and international status of the association. In the very near future, the formation of a Cuban section will likely materialize."

Louis R. Howson, of Alvord, Burdick & Howson, consulting engineers, Chicago, was elected vice-president. William W. Brush, editor of *Water Works Engineering*, was reelected treasurer.




EACH year the editors of *Engineering News-Record* covering the A.W.W.A. convention supplement regular activities with the publication of the *Waterworks Daily*. This 12 page newspaper appears each morning of the convention and reports what happened and to whom. The *Daily* is now entering its 27th year.

### *Technical sessions*

The technical sessions, at which more than 40 papers were presented, was marked by a lively interest in taste and odor control measures, pipe lining experiences, and design features of new waterworks installations. Chief among the latter were the description of the Wichita, Kan., 28-mile pipeline where the new law of design for cast iron pipe was employed, and details of the Lansing, Mich., water conditioning plant. A complete report of the technical sessions will be published next week.

Among the waterworks practice committee reports, approval was given to the tentative specifications for welded and riveted elevated tanks, standpipes and reservoirs; the 1935 specification has been withdrawn. Tentative specifications for hydrants and gates valves were also approved. Final specifications were adopted for steel pipe and enamel coatings.

Elected to honorary membership in

*(Continued on p. 11)*

Rudy Arnold

*CONEY ISLAND'S BOARDWALK in its old position may be seen at the upper right center; farther to the left a crane is picking up one of the trimmed 19 x 40 ft. panels of the treated-timber stringers and braces to move it to its place in the new boardwalk which is being built at the left center. New 2 x 4-in. fir flooring is being laid at the extreme left.*

# *Coney Island Boardwalk Goes for a Ride*

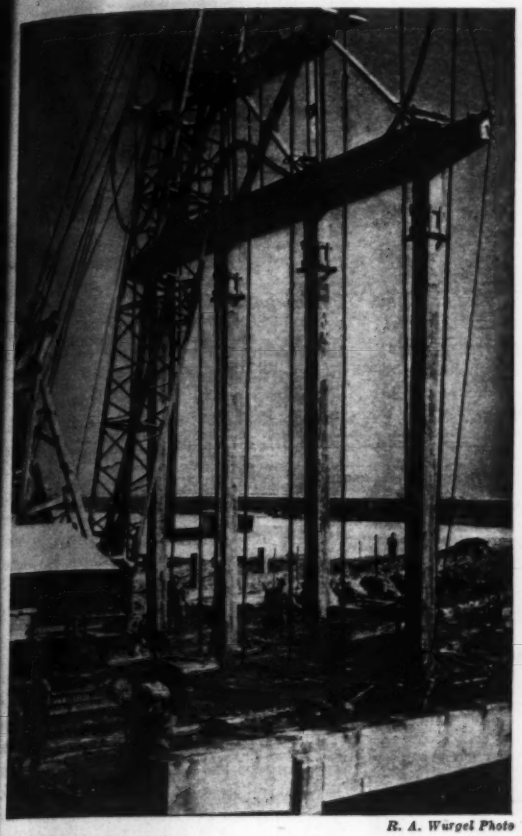
TO PROVIDE a greater beach area, a 3,880-ft. section of the boardwalk at New York City's famed Coney Island amusement center is being moved inland about 250 ft. (max. 325 ft.). The walk, 80 ft. wide, consists of wood flooring on 4 x 14 in. wooden stringers supported by concrete pile bents on a 19-ft. spacing. Each bent consists of four 14 x 14 in. concrete piles averaging 28 ft. in length joined at the top by a 40-ft. concrete beam 10 in. wide and 2 ft. 6 in. deep—two bents being used side by side.

Stringers and cross-bracing (treated timber 18 yr. old) and the concrete bents are being reused in the new location, only replacement of the flooring being necessary. Although original plans called for cutting the piles free from the beams and moving piles and beams individually, the contractor gained permission from the Park Department of the City of New York to move the four-pile bents as units and the stringers and bracing of the floor system in 19 x 40 ft. panels. As a result speed has been an outstanding feature of the work, first operations having begun in January with the completion date set for May 15 at a cost of $770,000.

Since it was found that the bents could be jetted free at the old site, moved over to the new location, and jetted in place at the rate of about one bent every two hours, only one crane is used for this work. One crane is also sufficient for removing the stringers and cross-bracing panels, setting them on horses for trimming, and later placing the sections on the bents in the new location.

Water for the jetting work, obtained from 200 well points sunk in the sand, is delivered at a pressure of 100 lbs. per sq. in.

The work is being done by the Arthur A. Johnson Corp. and Necaro Co. Inc., New York, associated with E. W. Foley, Inc., Brooklyn, N. Y. C. A. Leighton is job manager; Michael L. Dorsey, superintendent, and Wilbur C. Ring, resident engineer. For the Park Department, James A. Dawson is engineer in charge; John Mulcahy, resident engineer, and Boni Liljeback, chief inspector. The Griffin Wellpoint Corp., New York, supplied the equipment for doing the jetting work.

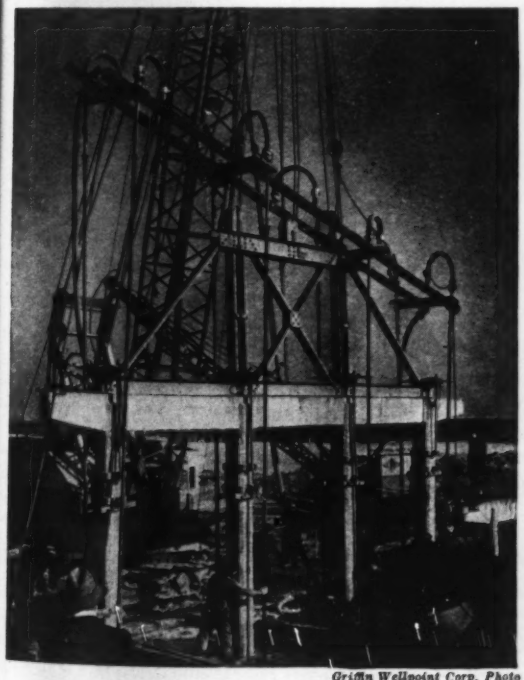


R. A. Wurgel Photo

MOVING concrete bents is accomplished with a 2½-cu. yd. crane equipped with a 60-ft. boom.

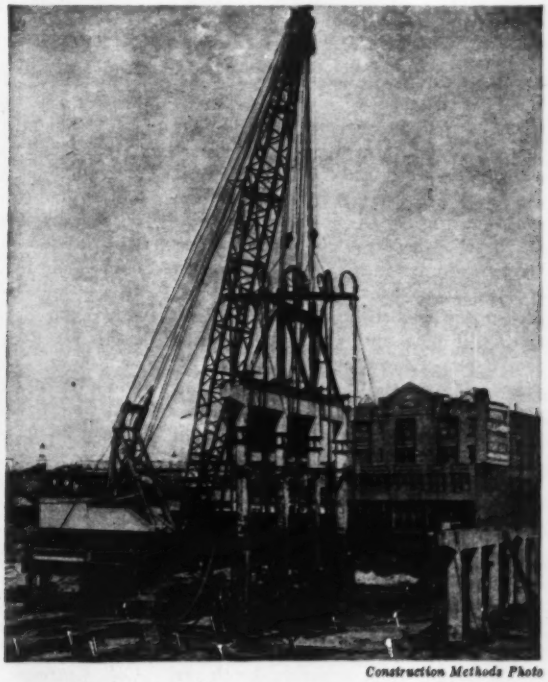
R. A. Wurgel Photo

WOODEN STRINGERS and cross-bracing are moved with a 1-cu. yd. crane having a 70-ft. boom and special lifting frame.



Griffin Wellpoint Corp. Photo

HAND WINCHES provide for operating jetting system independent of truss.



Construction Methods Photo

TWO 2-in. pipes ending in 1-in. nozzles are used at each pile for jetting work.

# WASHINGTON HIGHLIGHTS

*Special reports by Paul Wooton*

CUT MORE than $80,000,000 by the elimination on the Senate floor of two big projects, the river and harbor authorization bill was passed by the Senate last week and sent to conference. As passed, the bill authorizes appropriations of $150,000,000 to construct 146 projects. The Senate committee on commerce had recommended that $231,000,000 be authorized, but the Senate struck out the $66,000,000 canal connecting the Tombigbee and Tennessee rivers and the $23,700,000 Umatilla Dam project on the Columbia River. A few small projects were added on the floor.

The bill now goes to conference to reconcile the differences between it and the House version which authorizes only $84,000,000. Since the Umatilla and Tombigbee projects were not in the House bill, there is no possibility of their being inserted in conference.

The present bill appropriates no money. It merely provides that the Chief of Engineers may, if he wishes, carry out the authorized projects when Congress provides the money in an annual lump sum War Department civil works appropriation, final selection being left to the army engineers.

STUDIES by the Soil Conservation Service of methods to prevent seepage from irrigation ditches would be authorized by a bill introduced by Senator Clark of Idaho. The studies would be conducted in cooperation with the Bureau of Reclamation, and the Secretary of Agriculture would be empowered to assign money that might be appropriated for the purpose to other interested agencies. The Soil Conservation Service is now making a few studies of this type, but there is some question as to whether it has the power to do so legally. Introduced so late in the session, the bill has little chance of passage and is introduced now primarily as groundwork for another bill next session. Moreover, though Senator Clark's office is confident it will be approved by the departments effected, there is some question whether the Bureau of Reclamation would relish this joint arrangement.

OPPOSITION to government ownership of railroads both "personally and officially" was expressed by Louis Johnson, Assistant Secretary of War, at a meeting of the Association of American Railroads held in Washington April 26. Speaking on the subject of the railroads and national defense, Johnson said that the Army and Navy never again will permit congestion to develop as it did in the World War days due to their failure to unload thousands of cars. He added that the Army is not organized to run the railroads and does not want the job. "There is no place in our transportation plan for government ownership or operation. We have predicated our whole industrial mobilization program on the maintenance of the established American way of getting things done. . . . I do not want to put on the public payroll the thousands upon thousands of wage-earners now privately employed by the American railroads."

THE SCOPE of the Walsh-Healey Act relating to the payment of prevailing wages by those doing work for the federal government was broadened this week by the U. S. Supreme Court in reversing an injunction obtained by the "Little Steel" companies against the Secretary of Labor in the court of appeals of the District of Columbia. The action centered around the Secretary's interpretation of the word "locality" in the Walsh-Healey Act as covering a much wider area than the steel companies thought it should. The Supreme Court upheld the Secretary's right to interpret the law in any way that appeared to her to be in line with the policy of Congress in writing the law.

**KANOPOLIS DAM WILL GIVE KANSAS ITS FIRST FLOOD RESERVOIR**

KANSAS can "raise more corn and less hell," as it once was advised to do, when its gets its periodic floods under control. And on May 10, a definite start will be made in this direction when the Army Engineers receive bids on the control works for Kanopolis Dam, first of three structures in the plan for taming the tributaries of the Kansas or Kaw River. Containing a tunnel, intake tower and stilling basin this contract will pave the way for the main dam contract later in the summer.

Located on the Smoky Hill River not far from the town of Salina, Kanopolis Dam will consist of a rolled earth fill of 11,000,000 cu.yd.; crest length 11,600 ft. and height 100 ft. Its reservoir storage capacity of 450,000 acre ft. will include 50,000 cu.ft. in a permanent conservation pool which will be used to maintain a minimum dry weather discharge of 80 sec. ft., benefiting water supply and sanitation of the towns downstream. As shown in the accompanying artist's sketch an open cut spillway is located at the opposite end of the dam from the control works.

Estimated to cost $9,000,000 the project will solve Salina's flood control problem and will benefit Junction City, Manhattan, Topeka, Lawrence and other cities in the rich agricultural valley that extends eastward 200 miles to Kansas City. Some day Congress will provide money for two even larger dams—on the Republican and Blue rivers—and then Kansas City will be safe from the Kaw's high water. The complete plan contemplates reducing maximum discharge at Kansas City from 700,000 to 540,000 sec. ft. which will flow between new levees that will take a 35 ft. stage. Some of these are already under way—earth embankment around the Fairfax industrial district and a concrete wall around the Kansas City, Kan. waterworks. The Army Engineers consider Kanopolis Dam as the spearhead of a program that will make the devastation of the great flood of 1903 impossible of repetition. Responsibility for the work rests with Col. Clarence L. Sturdevant, division engineer and Maj. Alexander M. Neilson, district engineer at Kansas City, Mo.

# MEN AND JOBS

BERNARD H. GREHAN, vice president of George J. Glover Co., Inc., general contractors of New Orleans, has been named to the board of administrators of Tulane University, New Orleans. A graduate of Tulane with an engineering degree in 1915, Grehan was connected for some itme with the U. S. Engineers. For a time prior to the World War he was with J. F. Coleman, New Orleans, consulting engineer. After serving in France with the 312th Engineers, he joined the Glover firm.

OSCAR A. BAARSON, city engineer at Helena, Mont., for the past 11 years, has resigned to enter private practice, effective May 6.

DOUGLAS SHINN, project engineer at Gillette, Wyo., for the Wyoming State Highway Department, has resigned to join the Keahy Construction Co. He will be succeeded by R. H. Cole, of Casper, Wyo.

W. EDWARD GREEN is now working at Rapid City, S. D., and has left Colorado to work on the Rapid Valley project for the U. S. Bureau of Reclamation as office engineer.

H. C. HOFHEIMER, II, general manager of the Hofheimer Concrete Corp., Norfolk, Va., has been named president of a newly formed corporation known as the Highway Contractors, Inc. He will continue his duties with the old firm. D. C. West of Roanoke, Va., who has had 25 years experience in bridge building, is vice president of the new corporation, as is D. S. Blount, also of Roanoke. Blount has had 17 years experience in heavy excavation, road building and bridge work.

JOHN QUINCY JEWETT has been made a member of the firm of Leeds, Hill, Barnard, and Jewett, consulting engineers of Los Angeles, Calif., formerly Quinton, Code and Hill-Leeds and Barnard. Jewett received a bachelor of science degree in civil engineering from the University of Colorado in 1920. For a time he worked with the Lyman Water Co., St. Johns, Ariz., leaving there to go with the American Bridge Co., Gary, Ind., as structural draftsman. From 1921 to 1923 he was instructor in the civil engineering department, University of Colorado. In 1926 he joined Quinton, Code & Hill, Los Angeles, Calif., as designing engineer.

CMDR. R. R. LUKENS, inspector, San Francisco district, U. S. Coast Geodetic Survey for the past four years, has been transferred to Manila, P. I., where he will be director of Coast Surveys, a bureau of the Philippine Islands Commonwealth carrying on the charting of coastal waters (some 11,000 mi. of shoreline) that was begun in 1901. LIEUT. J. M. SMOOK, formerly in charge of the processing office, U. S. Coast Geodetic Survey, Seattle, Wash., has been transferred to San Francisco to succeed Commander Lukens.

JOSEPH D. LEWIN, recently an associate engineer in the office of the district engineer, Boston District, U. S. Engineers, is now with the Board of Water Supply, New York, on the Delaware water supply project.

GLENN B. WOODRUFF, bridge engineer of the San Francisco-Oakland Bay Bridge from 1931 to 1939, has opened an office in San Francisco, as consulting engineer with special reference to traffic studies and to contractors' problems involving false work, cofferdams, etc. Woodruff has acted recently as consultant for the U. S. Bureau of Reclamation on railroad bridge work of the Central Valley Project and on rearrangement of interurban service between San Francisco and the East Bay.

FRED W. VOEDISCH, of Grand Forks, N. D., for a number of years secretary of the water resources of North Dakota, has joined the Layne-Western Co. of Minnesota.

JAMES THORBURN, area engineer for WPA operations in Dixon, Dakota, Knox and Cedar counties, Neb., and stationed at Hartington, Neb., has resigned to join the Elkhorn Construction Co. at Norfolk, Neb. ROBERT EGAN, of Albion, Neb., has been named his successor.

WILLIAM H. WOOD, Austin, Tex., has resigned as materials and tests engineer for the Texas State Highway Department, to act as district distributor in the southwestern area for Rubber Associates, Inc., New York City. Wood's territory will include the states of Texas, Oklahoma, Arkansas, Mississippi and Louisiana.

H. A. R. AUSTIN, Honolulu consulting civil engineer, and G. K. LARRISON, former advisory engineer with the Hawaiian Homes Commission, have been appointed by the City-County of Honolulu civil service commission to direct the classification of municipal jobs. The classification program is to be completed by July 1, when pay adjustments will be made in accordance with the new salary schedule.

RAY BARNETT has resigned as bridge designer for the state of California, division of highways, to join DONALD R. WARREN, structural and civil engineer of Los Angeles. Prior to his work with the division of highways, Barnett, a graduate of the University of California, was an engineer on the San Francisco-Oakland Bay Bridge. He has also had wide experience in municipal and highway engineering in Southern California.

F. S. WILKINS, of Halifax, N. S., has been named division engineer for Prince Edward Island by the Canadian National R. R.

CARL J. BACHMANN, formerly student engineer in the Lands Section of the U. S. Engineer Office at Rock Island, Ill., has begun new work as junior engineer with the Bureau of Reclamation on the Tucumcari, N. M., project

B. R. KULP, engineer of maintenance, Chicago & North Western Ry., has been appointed chief engineer to succeed CHESTER T. DIKE, who retires but retains his position as vice-president.

JOHN BUDD, long connected with the engineering department of the city of Des Moines, has been elected city commissioner of streets to succeed JOHN MACVICAR, who did not run for reelection. Budd served as city engineer in 1902, from 1908 to 1912, and again in 1935. Budd, also a former Polk County engineer and city of Des Moines sanitary engineer, has been street commissioner several times. Since 1937 he has been chief engineer for the Watts Construction Co., Clinton, Ind., maintaining his residence in Des Moines.

CHESTER HAENNY has been rehired as city engineer of Lowellville, Ohio.

GLEN A. WHITE, formerly Saskatchewan division engineer for the Grand Trunk Pacific R. R., has been appointed sales engineer for the Northern Wood Preservers, Ltd., Toronto, Ont.

RAY ANDERSON, civil engineer of the U. S. Engineers, has been transferred to Fort Mills, Manila, Philippine Islands, as engineer in charge of construction. Anderson, a graduate of Iowa State College, has been employed on the Denison Dam work at Denison, Tex.

O. C. HELSETH, former assistant city engineer at Owatonna, Minn., has been named city engineer at Crookston, Minn., to succeed L. W. NEWBERRY. Helseth for a time was employed by the Minnesota State Highway Department, supervising the construction of the Front St. Bridge between Fargo, N. D., and Moorhead, Minn.

# MEETINGS

ASSOCIATED GENERAL CONTRACTORS OF AMERICA, Spring Board Meeting, Schroeder Hotel, Milwaukee, Wis., May 6-9.

NATIONAL FIRE PROTECTION ASSOCIATION, annual meeting, Atlantic City, N. J., May 7-11.

AMERICAN ROAD BUILDER'S ASSOCIATION, annual business meeting, Washington, D. C., May 8-10.

BUILDING OFFICIALS CONFERENCE OF AMERICA, Hotel Jefferson, St. Louis, Mo., June 3-6.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION, annual meeting, Hotel Pennsylvania, New York City, June 4-6.

NATIONAL CONFERENCE ON PLANNING, San Francisco, Calif., June 8-12.

AMERICAN SOCIETY FOR TESTING MATERIALS, annual meeting, Atlantic City, N. J., June 24-28.

ELECTIONS AND ACTIVITIES

PACIFIC NORTHWEST SEWAGE WORKS ASSOCIATION, Portland, Ore., May 8.

AMERICAN WATER WORKS ASSOCIATION, Pacific Northwest Section, Portland, Ore., May 9-11.

MARYLAND-DELAWARE WATER AND SEWERAGE ASSOCIATION, annual conference, Salisbury, Maryland, May 16-17.

MISSOURI RIVER VALLEY ASSOCIATION, Yankton, S. D., May 17.

AMERICAN WATER WORKS ASSOCIATION, New Jersey Section, spring meeting, Stacy-Trent Hotel, Trenton, N. J., May 22.

INTERNATIONAL FEDERATION OF ARCHITECTS, ENGINEERS, Chemists and Technicians, fifth national convention, Hotel Pennsylvania, New York City, May 31-June 2.

ELECTIONS AND ACTIVITIES

L. W. EDISON, veteran Grand Rapids road contractor, was elected president of the Michigan Road Builders' Association at the association's annual meeting in Detroit April 10. Edison succeeds Julius Porath of Detroit. Walter Toebe of Lansing was re-elected vice-president; P. M. Thornton of Hancock was elected Upper Peninsula vice-president;

L. W. EDISON

and L. W. Lamb of Holland was re-elected secretary-treasurer. Floyd E. Koontz of Lansing is executive secretary. About 1,300 highway and bridge contractors and their friends attended the association's annual banquet following the business meeting. Speakers included: Congressman Wilburn Cartwright, chairman of the House Committee on Roads; Charles M. Upham, engineer-director of the American Road Builders' Association; Hal G. Sours, president-elect of the A.R.B.A., and Murray D. Van Wagoner, retiring president of the A.R.B.A.

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## *Engineering Conferences*

WELDING CLINIC - DEMONSTRATION: School of Engineering, Rhode Island State College, Kingston, R. I., May 10-11.

SECOND ANNUAL SURVEYING CONFERENCE, sponsored by the New Jersey Society of Professional Engineers, Rutgers University, New Brunswick, N. J., May 18, 1940.

NEW OFFICERS OF MISSOURI COUNTY HIGHWAY GROUP

WHEN the County Highway Engineers and Surveyors Association was organized at a surveyors' conference at the Missouri School of Mines, Rolla, April 13, D. E. Hill (second from left), Boone County Engineer and surveyor, was elected temporary president. Other officers elected include: J. Broder Frans (second from right), highway engineer of Buchanan County, vice president; O. J. Holtman (left), surveyor and highway engineer of Audrain County, vice president, and J. B. Butler (right), professor of civil engineering, Missouri School of Mines, secretary.

## Waterworks Men Meet

(Continued from p. 5)

the association were George H. Fenkell, general manager, Board of Water Commissioners, Detroit; James E. Gibson, manager and engineer, water department, Charleston, S. C.; John A. Kienle, vice president, Mathieson Alkali Works, New York; and Herbert M. Lofton, general manager, Columbian Iron Works, Chattanooga, Tenn.

The Diven Memorial Medal, awarded each year to the member who has rendered outstanding service, was presented to W. Victor Weir, superintendent of the St. Louis County Water Co. The Nicholas S. Hill, Jr., cup was awarded to the Southwest section for having made the largest percentage gain in membership. The Wisconsin section received the Franklin Henshaw cup for best attendance at meetings.

T. H. Wiggin, consulting engineer of New York and M. L. Enger, dean of the College of Engineering, University of Illinois, were the co-winners of the John M. Goodell Prize, established by *Engineering News-Record*, and awarded for the best technical paper.

## CIO Contracts Signed by Contractors In Heavy Construction Field

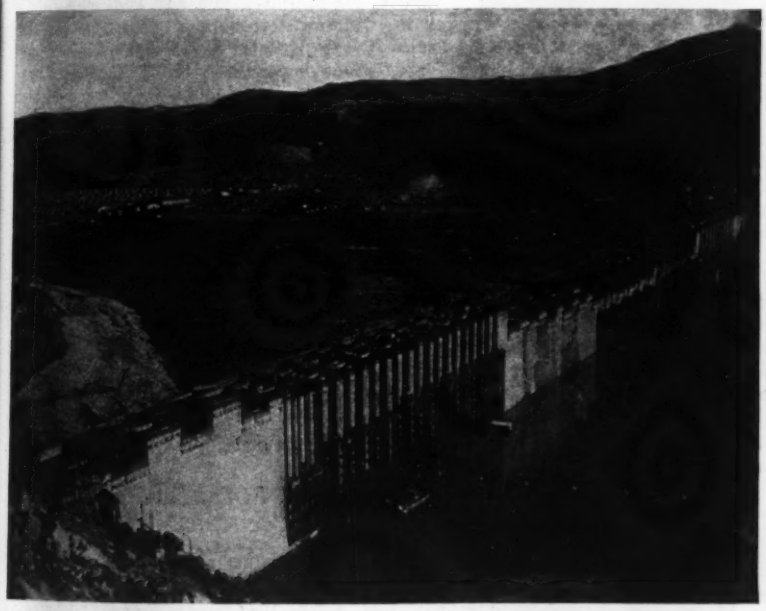
**Three midwestern contractors doing Missouri River work sign closed shop agreements**

Taking a second major step into the heavy construction field, CIO's Construction Workers Organizing Committee has signed closed shop contracts with Woods Bros., W. P. McGeorge, and Patton-Tully Transportation Co., three midwestern contractors doing revetment work on the lower Missouri River. The contract, which will effect about 1,000 men, differs from those negotiated in Pennsylvania last month (*ENR*, March 28, p. 427) in that it is specifically limited to the life of the revetment job on which the contractors are now engaged—a matter of about three years. The wage rates, also, are somewhat lower.

The CWOC reports that its organizational activities have not yet brought about any major clash with the AFL, though several small jobs have been briefly shut down. Distinct possibilities of trouble are seen, however, in the fact that CIO is pushing into several AFL strongholds. In New York, the CIO has already taken one contract away from the powerful Local 3 of the AFL electricians, signing up the Electric Underground Construction Co., which was formerly AFL. Penner, the electrical contractor who recently brought a sensational suit against Local 3, has also gone CIO.

At least partly because the teamsters would be a strategic element in any AFL attempt to tie up CIO jobs, CWOC is actively organizing truck drivers, particularly in the Seattle area where the union claims a considerable number of small contracts. In Detroit a non-aggression pact has been worked out with the AFL teamsters, by which the CWOC refrains from organizing drivers in return for a promise that their jobs will be serviced. CWOC officials say they are confident that anywhere they have a substantial degree of organization they can provide trucking for their jobs.

A novel organizational technique now being worked out by the union is the creation of work to organize. Procedure is for the CWOC to encourage a contractor to develop a large block of low-cost houses, which CWOC will assist in marketing through CIO unions and on which, in return, CWOC labor will be employed. First result is a closed shop contract with the Whaley Construction Co. of San Pedro, Calif. Whaley has started building 400 two-bedroom houses.



**CONCRETING AT GRAND COULEE IN LAST BIG SEASON**

CONCRETING at Grand Coulee Dam is in its fifth and last big season. Since January 900 names have been added to the contractor's payroll and the mixing plant at the far end of the dam has begun heavy duty after a slack winter.

The lake in the back of the dam had attained more than 38 miles of its eventual 150-mile length when this view was taken. Storage for the irrigation of 1,200,000 acres will be provided.

At the left end of the dam on the downstream side (not shown) the west power house—765 ft. long and 85 ft. wide, one of the biggest buildings in the Pacific Northwest—is nearing completion. A similar structure will be built later on the east bank when the additional power is needed.

Contractors for the present work are the Consolidated Builders, Inc.; Mason-Walsh-Atkinson-Kier built the low dam. The work is being done by the Bureau of Reclamation.

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## Oklahoma Governor Loses In Grand River Dam Fight

The federal court at Tulsa, Okla. has granted the federal government a permanent injunction to supersede a temporary restraining order preventing Gov. Phillips of Oklahoma from interfering with completion of Pensacola Dam being built as part of the $20,000,000 Grand River hydro-electric project. Early in March Gov. Phillips ordered out the National Guard to stop work on the dam, which is PWA financed. He claimed that arrangements should be made to pay the state of Oklahoma $800,000 because certain roads would be submerged.

Pensacola Dam is being built by the Massman Construction Co., Kansas City. Holway & Neuffer, Tulsa, Okla., are consulting engineers for the Grand River project.

# OBITUARY

ROBERT F. SKINNER, 49, of Seattle, and engineer with the Bureau of Reclamation employed on Friant Dam, died at the dam site April 20. Skinner had served with the Bureau for 15 years and was assigned to Friant Dam five months ago, being transferred from the Roza division in Washington. Previously he had worked at Boulder Dam and at the Taylor Park Dam in Colorado. He was a graduate of the University of Nebraska.

CARL F. DODGE, SR., 56, head of Dodge Brothers Construction Co., Fallon, Nev., died April 23 in Reno. Dodge and his brother, the late Robert Dodge, established the Dodge firm 25 years ago, constructing many highways in Nevada and nearby states.

WALTER F. ROBINSON, 84, retired civil engineer, died April 28 in Arlington, Mass. Robinson, a graduate of the University of Maine with a civil engineering degree, early in life worked at Huron, S. D., as assistant on waterworks and general engineering. In 1889 he joined the Union Pacific R. R., leaving there in 1891 to join the Great Northern Ry. From 1896 to 1899 he served as assistant engineer with the U. S. Engineers at Portland, Maine, in charge of river and harbor improvements. In 1900 he was transferred to the Portsmouth, N. H., office.

G. E. BJORK, 37, for several years Northwest editor of *Western Construction News*, died in Portland, Ore., March 31. Bjork, a graduate of the University of Idaho with a civil engineering degree, spent 12 years on design and construction before joining *Western Construction News* in 1933. Following a year in the San Francisco office, he was transferred to Portland to establish the publication's Northwest office.

WILLIAM J. STOREN, 67, president of the W. J. Storen Co., contracting firm of Detroit, died April 23 in that city. From 1900 to 1905 Storen was employed on the construction of the Sanitary District Canal from Chicago to Lockport, Ill., leaving there to join the Federal Stone & Construction Co. Later he worked with the Michigan Central Ry. In 1910 Storen was appointed assistant superintendent of public works for the city of Highland Park, Mich., to become head of the department in 1914. Since 1917 Storen has been in the contracting business, first with the George R. Cooke Construction Co., Detroit, and later with the contracting firm bearing his name.

CHARLES AIBERT MENARD, 49, civil engineer and member of the chief engineer's office, Department of Public Works, Ottawa, Ont., died last month in Ottawa. Last year Menard served as representative of the Ontario Public Works Department at conferences in New York and Washington, D. C., to study the St. Lawrence seaway project.

MAXWELL HILL BAXTER, 51, chairman of the Charleston, S. C., County Sanitary and Drainage Commission, died in Charleston last month. Baxter, formerly president of the Baxter Iron Works, was appointed chairman of the Sanitary and Drainage Commission in January, 1939.

SAMUEL M. MILOVICH, paving contractor of Los Angeles, committed suicide April 26. Milovich had been in the contracting business in southern California for many years.

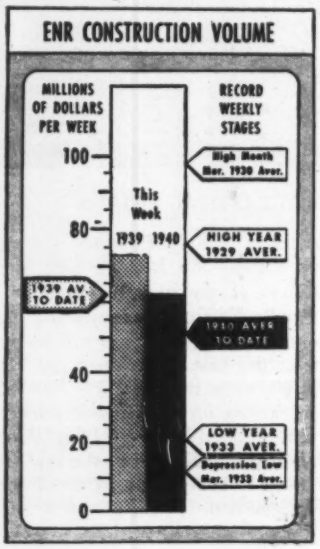
FRED A. MARTIN, 53, chief engineer of the central station of the Aurora, Ill., waterworks, died April 22 in Chicago.

# CONTRACTS AND CAPITAL

FOR THE FIFTH consecutive week private engineering construction awards have topped their respective 1939 weekly values. They are 9 per cent above a week ago, and 82 per cent above the corresponding 1939 week. The private gain coupled with a 25 per cent increase in public construction results in a 19 per cent increase in the total construction over a week ago. A 34 per cent decrease in public work compared with last year, however, brings total construction 16 per cent under a year ago.

The construction total for 1940 to date, $916,303,000, is 18 per cent below the level for the 18-week period last year. Private awards for the period, $320,230,000, are 15 per cent above 1939.

In the classified construction groups, industrial buildings, public buildings, and earthwork and drainage top their volumes of a week ago. Industrial buildings, commercial building and large-scale private housing, and earthwork and drainage exceed their totals for the 1939 week.




New capital for construction purposes for the week totals $26,595,000, an increase of 27 per cent over the volume for the corresponding 1939 week. The current week's financing is made up of $17,297,000 in state and municipal bonds, $4,298,000 in corporate security issues, and $5,000,000 in RFC loans to private industry for improvements and additions.

New construction financing for the year to date, $391,895,000, in 43 per cent lower than the $689,582,000 reported for the 18-week period last year.

## CONTRACTS

(Thousands of dollars)

| | Week Ending May 4 1939 | Apr. 25 1940 | May 2 1940 |
|---|---|---|---|
| Federal ..... | $14,086 | $3,331 | $14,370 |
| State & Municipal | 47,819 | 29,455 | 26,697 |
| Total public.... | $61,905 | $32,786 | $41,067 |
| Total private... | 11,362 | 18,967 | 20,679 |
| TOTALS ..... | $73,267 | $51,753 | $61,746 |
| Cumulative | | | |
| 1940 .....(18 weeks)... | | | $916,303 |
| 1939 .....(18 weeks)... | | | $1,115,104 |

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial building, $40,000; other buildings, $150,000.

## NEW PRODUCTIVE CAPITAL

| | Cumulative 1939 18 Wks. | 1940 18 Wks. |
|---|---|---|
| NON-FEDERAL ... | $378,155 | $391,895 |
| Corp. Securities.. | 85,471 | 70,509 |
| State & Mun..... | 213,349 | 242,323 |
| R.E.A. loans..... | 22,211 | ..... |
| U.S.H.A. loans... | 56,890 | 73,551 |
| R.F.C. loans..... | 234 | 5,512 |
| FEDERAL ..... | $311,427 | $..... |
| TOTAL CAPITAL.. | $689,582 | $391,895 |

## FHA MORTGAGES

| | Week Ending Apr. 29 1939 | Apr. 20 1940 | Apr. 27 1940 |
|---|---|---|---|
| Selected for appraisal | $25,341 | $28,202 | $28,738* |
| Cumulative | | | |
| 1940 .....(17 weeks).... | | | $383,899* |
| 1939 .....(17 weeks).... | | | $388,198 |

* Subject to revision.

## ENR INDEX NUMBERS

| | | 1913 | 1926 |
|---|---|---|---|
| Index Base = 100 | | | |
| Construction Cost | Apr. '40.. | 238.26 | 114.53 |
| Building Cost | Apr. '40.. | 201.44 | 108.89 |
| Volume | Mar. '40.. | 162 | 71 |

# CONTRACT UNIT PRICES

*What contractors are bidding on different kinds of construction work*

## PUMPING PLANTS TELL CITY, INDIANA

OWNER: U. S. Engineer Office, Louisville, Ky.

PROJECT: Construction of Washington Street and Fulton Street pumping plants for Tell City flood protection works. Also involves construction of outfall sewer, connecting sewer, manholes and furnishing and installation of pumps and electrical equipment.

CONDITIONS: Contractor to furnish all materials and complete work in 250 working days. Rail, highway and water transportation facilities available. Wage rates are: skilled labor, $1.10 per hr.; semi-skilled, 70c.; and common labor, 50c. per hr.

BIDS: Eighteen bids were opened February 21, 1940 ranging from the contract low of $123,826 to $167,449.

LOW BIDDERS:

1. Clarke, Stewart & Wood Co., Lexington, Ky. (contract) ..... $123,826
2. A. G. Ryan & Sons, Evansville, Ind..... 131,999
3. The Penker Constr. Co., Cincinnati, Ohio.... 133,695

| Item | Quan. | Unit Prices (1) | (2) | (3) |
|---|---|---|---|---|
| 1. Excavation, common | 2,630 c. y. | $1.77 | $1.75 | $2.00 |
| 2. Rock excavation | 210 c. y. | 5.00 | 5.00 | 15.00 |
| 3. Backfill, compacted | 500 c. y. | 1.92 | 1.50 | .80 |
| 4. Concrete | 950 c. y. | 17.00 | 17.50 | 25.00 |
| 5. Reinforcing steel | 124,900 lb. | .0431 | .052 | .05 |
| 6. Structural steel | 21,000 lb. | .09 | .105 | .10 |
| 7. Miscellaneous metals | 2,330 lb. | .14 | .21 | .20 |
| 8. Conn. sewer, monolith. conc., 42-in. | 60 l. f. | 20.00 | 21.00 | 26.50 |
| 9. Outfall sewer, monol. conc., 60-in. | 478 l. f. | 26.50 | 30.00 | 35.00 |
| 10. 8-in. flap gate | 3 ea. | 25.00 | 21.00 | 17.00 |
| 11. 48-in. sluice gate | 1 ea. | 620.00 | 730.00 | 520.00 |
| 12. 60-in. sluice gate | 1 ea. | 880.00 | 1,000.00 | 1,130.00 |
| 13. Hand placed riprap | 20 c. y. | 6.00 | 5.50 | 6.00 |
| 14. Gravel blanket | 10 c. y. | 4.00 | 2.00 | 3.50 |
| 15. Superstr. Washington St. plant | L. S. | 7,240.00 | 5,897.00 | 10,560.00 |
| 16. Superstr. Fulton St. plant | L. S. | 7,540.00 | 6,317.00 | 9,800.00 |
| 17. Manhole | L. S. | 830.00 | 762.00 | 788.00 |
| 18. Pump and motor unit, 27,500 gpm. | 2 ea. | 6,000.00 | 7,000.00 | 6,000.00 |
| 19. Pump and motor unit, 23,400 gpm. | 3 ea. | 5,000.00 | 6,831.00 | 5,000.00 |
| 20. Pump and motor unit, 18,000 gpm. | 1 ea. | 4,800.00 | 5,992.00 | 3,000.00 |
| 21. Pump and motor unit, 12,000 gpm. | 1 ea. | 4,000.00 | 3,674.00 | 2,000.00 |
| 22. Pump and motor unit, 6,000 gpm. | 2 ea. | 2,700.00 | 2,591.00 | 1,500.00 |
| 23. Pump and motor unit, 2,800 gpm. | 1 ea. | 3,000.00 | 2,872.00 | 2,000.00 |
| 24. Power, light, control sys. Wash. St. plant | L. S. | 8,500.00 | 7,820.00 | 6,500.00 |
| 25. Power, light, control sys. Fulton St. plant | L. S. | 9,500.00 | 9,250.00 | 7,500.00 |

## SEWAGE PLANT, WATER LINES TEXAS

OWNER: City of Monahans, Tex., E. R. Hill, mayor; Koch & Fowler, Dallas, engineers.

PROJECT: Construction of sewage disposal plant, lift station, sewer and water lines and appurtenances in Monahans, Tex. A concrete surface storage reservoir and two 500-gpm. centrifugal pumps provided for in other contracts.

CONDITIONS: Rail and highway transportation available. Contractor to furnish all materials and complete work in 75 days. Wage rates are: skilled, $1.00 per hr.; semi-skilled, 45 to 75 c.; and common, 40c. per hr.

BIDS: Eight bids were opened March 25, 1940, ranging from the contract low of $45,115 to $54,899.

LOW BIDDERS:

1. E. L. Dalton, Dallas, Tex. (contract) ..... $45,115
2. Trueheart & Caldwell, Austin, Tex..... 45,167
3. Vedder Constr. Co., Barstow, Tex..... 46,653

WATER LINES

| Item | Quan. | Unit Prices (1) | (2) | (3) |
|---|---|---|---|---|
| 1. Pump house, pipe, fittings and wiring to connect pumps from reservoir | L.S. | $875.84 | $1,172.20 | $1,270.00 |
| 2. Conc. for pump and bldg. fndn. | 11 c. y. | 25.00 | 10.00 | 30.00 |
| 3. 8-in. c. i. pipe, in place | 4,000 l. f. | 1.55 | 1.56 | 1.60 |
| 4. 6-in. c. i. pipe, in place | 9,400 l. f. | 1.11 | 1.13 | 1.15 |
| 5. 8-in. gate valves and boxes | 7 ea. | 43.55 | 48.00 | 40.00 |
| 6. 6-in. gate valves and boxes | 8 ea. | 32.40 | 33.00 | 25.00 |
| 7. 6-in. tapping sleeves with 6-in. valves and boxes | 2 ea. | 69.05 | 99.00 | 45.00 |
| 8. 2-in. gate valves (hub) and boxes | 12 ea. | 15.05 | 14.00 | 12.00 |
| 9. Fire hydrants | 19 ea. | 81.15 | 85.00 | 50.00 |
| 10. Cast iron special fittings | 7 tons | 140.00 | 157.00 | 100.00 |
| 11. Wet connections | 16 ea. | 20.00 | 43.00 | 20.00 |

SEWERS AND TREATMENT PLANT

| Item | Quan. | Unit Prices (1) | (2) | (3) |
|---|---|---|---|---|
| 1. Lift. station, equip. and elec. wiring | L.S. | $2,358.50 | $3,771.93 | $2,923.00 |
| 2. Imhoff tank, pipe and fittings | L.S. | 3,454.08 | 3,976.48 | 3,570.00 |
| 3. 12-in. vit. sewer pipe | 1,400 l. f. | .79 | .90 | .75 |
| 4. 10-in. vit. sewer pipe | 2,925 l. f. | .64 | .70 | .60 |
| 5. 8-in. vit. sewer pipe | 860 l. f. | .51 | .53 | .51 |
| 6. 6-in. vit. sewer pipe | 5,900 l. f. | .36 | .39 | .35 |
| 7. 4-in. vit. sewer pipe | 600 l. f. | .50 | .27 | .40 |
| 8. 6-in. c. i. force main in place | 4,050 l. f. | 1.10 | 1.07 | 1.10 |
| 9. Trench excav., 0 to 4-ft. deep | 100 l. f. | .10 | .06 | .20 |
| 10. Trench excav., 4 to 6-ft. deep | 550 l. f. | .15 | .08 | .22 |
| 11. Trench excav., 6 to 8-ft. deep | 1,790 l. f. | .23 | .12 | .25 |
| 12. Trench excav., 8 to 10-ft. deep | 2,250 l. f. | .30 | .14 | .35 |
| 13. Trench excav., 10 to 12-ft deep | 1,750 l. f. | .35 | .19 | .55 |
| 14. Trench excav., 12 to 14-ft. deep | 4,460 l. f. | .52 | .23 | .65 |
| 15. Trench excav., 14 to 16-ft. deep | 975 l. f. | .69 | .34 | .80 |
| 16. 6 x 4-in. vit. tile wyes | 123 ea. | .50 | .80 | .80 |
| 17. 8 x 4-in. vit. tile wyes | 7 ea. | 1.00 | 1.55 | 1.55 |
| 18. 10 x 4-in. vit. tile wyes | 16 ea. | 1.50 | 2.00 | 2.17 |
| 19. 12 x 4-in. vit. tile wyes | 12 ea. | 2.00 | 3.00 | 2.79 |
| 20. 4-in. vit. tile wyes | 150 ea. | .40 | .50 | .52 |
| 21. 4-in. vit. tile stoppers | 300 ea. | .05 | .05 | .05 |
| 22. 4-in. vit. tile bends | 50 ea. | .50 | .80 | .52 |
| 23. Irrigation ditch | 2,000 l. f. | .20 | .07 | .20 |
| 24. Standard cleanouts | 6 ea. | 12.00 | 13.50 | 15.00 |
| 25. Manholes, 0 to 6-ft. | 7 ea. | 50.00 | 65.00 | 45.00 |
| 26. Extra depth of manhole | 42 l. f. | 7.50 | 5.50 | 8.00 |
| 27. Structural excavation | 385 c. y. | 1.50 | 1.00 | 1.00 |
| 28. Clearing | 20 ac. | 15.00 | 7.00 | 15.00 |
| 29. Earth excav., levee for holding basin and sludge bed | 300 c. y. | 1.00 | .65 | .50 |
| 30. Remove, replace asphalt paving | 400 l. f. | .50 | .38 | 1.00 |

## HIGHWAY SURFACING MONTANA

OWNER: Montana State Highway Commission, Helena; F. A. Small, engineer.

PROJECT: Surfacing 17.082 miles of highway between Culbertson and Sidney, Mont. Crushed gravel base course, and grade A crushed gravel top course with binder.

CONDITIONS: Contractor to furnish all material and complete work by Nov. 30, 1940. Rail transportation available to Culbertson or Sidney, but at no points between. Wages are: skilled, $1.20 per hr.; semi-skilled, 82½c.; and common, 65c. per hr.

BIDS: Seven bids were received Mar. 28, 1940, ranging from the contract low of $114,453 to $135,335.

LOW BIDDERS:

1. Albert Lalonde Co., Sidney, Mont. (contract) $114,453
2. Collison & Dolven, Inc., Billings, Mont..... 117,123
3. Inland Constr. Co., Omaha, Neb..... 119,273

| Item | Quan. | Unit Prices (1) | (2) | (3) |
|---|---|---|---|---|
| 1. Base course crushed gravel | 96,700 ton | $0.85 | $0.80 | $0.75 |
| 2. Gr. A top course crushed gravel surf. | 28,229 ton | .90 | 1.00 | .90 |
| 3. Binder | 5,000 c. y. | .10 | .10 | .25 |
| 4. Overhaul on binder | 10,000 y. mi. | .05 | .10 | .15 |
| 5. Watering | 4,000 M gal. | .60 | 1.50 | 3.50 |
| 6. Rolling | 500 hr. | 3.00 | 3.50 | 4.00 |
| 7. Concrete project markers | 2 ea. | 10.00 | 10.00 | 15.00 |
| 8. Conc. right-of-way monuments | 80 ea. | 3.00 | 3.50 | 5.50 |
| 9. Station markers | 92 ea. | 1.00 | 2.00 | 3.50 |
| 10. Stock piled gravel | 2,000 ton | .80 | .90 | .90 |

# CONSTRUCTION REPORTS

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Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, MANAGER
SCOTT McLEOD, STATISTICIAN
(Daily service also available—Write for details)

**Projects—By Size**

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

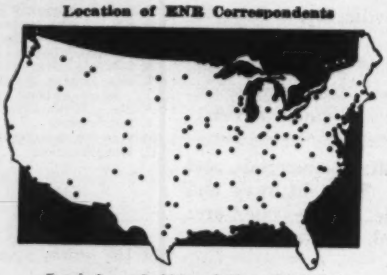
**Classes of Construction**
(Named in order of Listing)

| | |
|---|---|
| Water Supply | Unclassified |
| Sewers, Waste Disposal | Latin America |
| Bridges, Grade Cross'gs | Public Buildings |
| Streets & Roads | Commercial Buildings |
| Earthwork, Waterways | Industrial Buildings |

**Stages Reported**

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR); LOW BIDDERS: All low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published. CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

**Location of ENR Correspondents**



**Symbols and Abbreviations Include:**

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Dates shown are of issue in which last previous report was published.

## WATER SUPPLY

### PROPOSED WORK

**Ala., Livingston**—WW imprvts. J. W. Goodwin, Engineering Co., Martin Bldg., Birmingham, engr.

**Ariz., Flagstaff**—WW imprvs., pipe line, diesel pumps, electric pumps, treatment plant. $255,759. Applied to RFC for $180,000 loan.

**Calif., San Francisco**—Appropriating $65,000, extens., meters, Sunnyvale and Lakeshore Highlands Dists.

**Conn., New Britain**—S. Googel, chn P.. Wks. Bd., City Hall. 24 in. service watermain from Shuttle Meadow Reservoir into city also pipe line from Carlton St. through North End Park. $230,000. Bond issue financing. G. Molleur, City Hall, engr.

**Ind., Bloomington**—J. Bruner, mayor, dam in Griffey Lake for water sys. $75,000. WPA. Greeley & Hansen, 6 N. Michigan Ave., Chicago, Ill., engrs.

**Kan., Kansas City**—Village, H. Barber, clk., exten. watermains Wyandotte Twp. near here, $16,500. R. M. LaFollette, Finance Bldg., Kansas City, engr.

**N. Y., Niskayuna**—Niskayuna Water Dist. 3, exten. watermains. Over $15,000.

**N. Y., Schenectady**—Caisson well and pump. sta., Schermerhorn property. $370,000. M. Pirnie, 25 W. 43 St., New York, engr.

**N. C., Boonville**—H. B. Gentry, mayor, water and sewerage sys. $49,873. Application filed with WPA. W. F. Freeman, High Point, engr.

**N. C., Cary**—R. W. Mayton, mayor, town election May 28, $10,000 bonds exten. WW sys., over $30,000. CD 4/23—ENR 4/25.

**N. C., Magnolia**—$32,000 bond election May 6, water and sewerage sys. $32,000. H. B. Gaylor, mayor.

**O., Botkins**—WW sys., treatment plant. $200,000. Application made for WPA approval. C. J. Simon, Evans Central Bldg., Van Wert, engr. W. Taubken, mayor.

★**O., Canton**—Imprv. Sippo Lake water field, increasing capacity flow to 10 m.g. daily. $1,250,000. Applied to WPA for gr. J. A. Shisler, city engr.

**O., Perry**—WW., water wells, treatment plant, water supply tower. $33,000. C. J. Simon, Van Wert, engr. (tentative).

**O., Wadsworth**—Exten. water distr. service to Clarks Corner community. $25,000. Applied for WPA funds.

**Okla., Vinita**—Bond election May 8, watermain exten., new pump. equip. $32,000. Holway & Neuffer, 302 E. 18 St., Tulsa, engrs.

★**Pa., Phila.**—Voted $18,000,000 loan at primary election, WW rehabilitation. Morris Knowles, Inc., Westinghouse Bldg., engr. CD 3/13—ENR 3/21.

**Tex., Channelview**—Fresh Water Dist., water imprv. $50,000. Haile & McClendon, Scanlan Bldg., Houston, engrs.

**Tex., Palestine**—R. H. McLeod, mayor, voted bonds, expansion program, drilling, equipping new water (deep) supply wells, laying large mains between wells and reservoirs, etc. $85,000. S. R. Buchanan, city engr. CD 4/12—ENR 4/18.

**Wis., Ableman**—P. Bittrick, clk., election May 21, bond issue WW sys., well supply, pumping station, storage tank, distribution sys., $83,000.

**Wis., Camp Douglas**—Village, E. J. Anthony, clk., watermains, sewers, sewage treatment plant, $140,000. F. J. Davy & Son, 502 Main St., LaCrosse, engr. Applied for WPA funds.

**Wis., LaCrosse**—F. Kimball, water plant supt., electrification city's water pump. sta., changing over from steam to electricity. $35,000.

**Wis., McFarland**—Emma Egner, town clk., WW sys. $43,000. W. G. Kirchoffer, 22 N. Carroll St., Madison, engr.

**Wis., Pepin**—D. Ingalls, clk., water sys., sewer sys., sewage treatment plant, $220,000. F. J. Davy & Son, 502 Main St., LaCrosse, engr. Applied for WPA funds.

**N. S., Stellarton**—WW sys. imprvs., and purchase c.i. pipe. $20,000. Dan McEachern, Town Hall, engr.

**Que., Kenogami**—Water sys. imprvs., purchase galvanized and c.i. pipe. $17,000. A. Bilodeau, Town Hall, engr.

**Que., Quebec City**—Province of Quebec, aqueduct imprvs. $20,000. Dpt. Mines & Fisheries, Quebec City, engr.

**Que., St. Joseph d'Alma**—Water sys. imprvs. and extens. $20,000. S. A. Desmeules, Town Hall, engr.

**Que., Victoriaville**—Replacement of 3 units, reconstructing pipe distr. in WW pump. plant, etc. $50,000. R. Morrissette, Town Hall, engr.

### BIDS ASKED

*Bids Asked May 6*

**N. Y., New York**—Comr. Water Supply, Gas & Electricity, Municipal Bldg., steel and c.i. watermains, appurtenances, in Central Park and in 5 Ave.

*Bids Asked May 8*

**Ind., Brookston**—Town Bd., R. W. Merchant, chn., water and light plant imprvs., diesel engine, soft water pumps, 2 panel switchboard exten., pumphouse addn. $15,000. M. L. Burden, 103½ N. Harrison St., Alexandria, consult. engr.

**N. Y., New York**—Comr. Water Supply, Gas & Electricity, Municipal Bldg., furnishing, installing and connecting boiler feed pumps, feed water heater, feed water regulators in west boiler room of Milburn Pump Sta., Freeport.

*Bids Asked May 10*

**Tex., Denison**—C. C. Hicks, city secy., 4 m.g. filtration plant, pump houses, equip. Extended date. A. M. Brenneke, Denison, engr. CD 4/8—ENR 4/11.

*Bids Asked May 14*

**Calif., Los Angeles** — Metropolitan Water Dist., 306 N. 3 St., 6.8 mi. lock joint steel cylinder, reinforced precast concrete, 58 in. diam., welded steel, 59 in. diam. or welded steel, coal tar enamel lining, 60 and 50 in. diam. pipe line, Glendale and Burbank. Over $25,000. F. E. Weymouth, 306 N. 3 St., engr.

*Bids Asked May 17*

**New Jersey**—E. D. Sterner, comr. State Hy. Dpt., Trenton, relocation, installation, Newark and Passaic Valley watermains. Route 6, Sect. 9, between Valley Rd. and Little Falls Station, Passaic Co.; adv. ENR 5/2.

*Bids Asked May 28*

†**Fla., Jacksonville**—P. Wks. Officer, Naval Air Station, Federal Bldg., Jacksonville, water distribution sys. water treatment plant, sanitary and storm sewers. $425,000.

### LOW BIDDERS

**N. Y., New York**—Comr. Water Supply, Gas & Electricity, Municipal Bldg., Apr. 24, electric pump. sta. in South Gate House, Central Park, near 86 St. and 5 Ave., from Lane Eng. Corp., 103 Park Ave. $64,588. CD 4/18—ENR 4/18.

### CONTRACTS AWARDED

**Colo., Delta**—Delta Co., water line, near Cedaredge. WPA. $45,114.

**Ga., Atlanta**—Waterworks Dpt., watermains, hydrants. WPA. $292,288.

**Miss., Kosciusko**—L. S. Sanders, mayor, one 1,050 hp. engine and electrical equip. for water and light plant, to Fairbanks-Morse Co., 1000 St. Charles Ave., New Orleans, La. $75,000. Est. $70,000. Bids 4/12, awarded 4/19. CD 3/27—ENR 4/4.

★**N. Y., Buffalo**—Water supply sys. imprvs., WPA. Over $1,000,000. C. W. Post, Old P. O. Bldg., Albany, ch. engr. WPA projects.

**O., Willshire**—WW sys., 75,000 gal. elevated steel storage tank, water softener, WPA. $34,000. C. J. Simon, Van Wert, engr. CD 11/27—ENR 11/30.

**Tex., Bertram**—WW sys., deep well for pump, distributing lines, fire hydrants, pumping unit, tank and tower, Purchase and Hire, about $30,000.

**Tex., Palestine**—R. H. McLeod, mayor, WW sys. imprvs., new 6 in. mains, exten. present main lines, new fire hydrants, WPA. $62,000. S. R. Buchanan, city engr.

**Tex., Winnsboro**—W. W. Butler, mayor, water line and sewer exten. WPA. $81,711.

**Wyo., Kemmerer**—WW imprvs., dam for reservoir with pipe line running to pump. sta., WPA. $300,000. CD 3/7—ENR 3/14.

**Ont., Toronto**—East York Twp., 12 in. watermain, etc., day labor. Est. $20,000. G. R. Jack, 443 Sammon Ave., comr. and engr.

**Sask., Humboldt**—2¼ mi. pipe line from Stone Lake pump house, to Nelson Constr. Co. Ltd., 607 Union Trust Bldg., Winnipeg, Man. Est. $40,000. Underwood & McLellan, 502 Grain Bldg., Saskatoon, engrs.

## SEWERS, WASTE DISPOSAL

### PROPOSED WORK

**Calif., Hollister**—Surveys storm sewer. Over $25,000. Bond election planned. A. M. McCray, city engr.

**Fla., Hollywood**—A. Cook, city mgr., in charge, surface drainage sys. Over $25,000.

**Idaho, Nampa** — Sewage disposal plant, $165,000. Election May 7, $98,000 bonds.

**Ill., Ridgeway**—Sewage disposal plant complete with auxiliary equip., piping, appurtenances, connecting sewers, etc. $50,000. Applied for WPA grant. L. B. Kinsey, 512 Court St., Pekin, engr.

**Ill., Rushville**—L. B. Patterson, mayor, defeated bonds, $100,000, complete sewer sys. and treatment plant. CD 4/8—ENR 4/11.

**Ind., Elwood**—Bd. P. Wks., G. M. Bonham, chn., sewage treatment plant, etc. $400,000. WPA. R. B. Moore & Co., Inc., 930 Ind. Pythian Bldg., Indianapolis, consult. engrs.

**Ia., Emerson**—Approved construction sewerage sys. $57,800. Leona Dixon, town clk. CD 3/14—ENR 3/21.

**Ky., Wheelright**—Inland Steel Co., 38 S. Dearborn St., Chicago, Ill., soon lets contract sewage disposal plant, 1 story, 9x10 ft. sewage plant, equip., appurtenances. $32,000. Greeley & Hansen, 6 N. Michigan Ave., Chicago, Ill., engrs. CD 3/22—ENR 3/28.

**Minn., Browns Valley**—A. J. Johnson, city clk., trickling filter type sewage disposal plant. $35,000. S. R. Schaub, Glenwood, and H. T. Hagestad, River Falls, Wis., engrs.

**N. Y., Rochester**—Storm and sanitary sewers Clifford Ave. from St. Paul St. to Portland Ave. $492,000.

**N. Y., Syracuse**—Dpt. P. Wks., City Hall, storm and sanitary sewers, Woodlawn Terrace Dist. Over $25,000. N. Pitts, City Hall, engr.

**N. Y., Utica**—Common Council, City Hall, sewers Pleasant and Whitesboro Sts. and at plant of Skenandoah Rayon Co. Over $50,000. J. B. Shaw, city engr.

**O., Canton**—West side interceptor (sanitary) running east of Camden Ave. west to west of Harrison Ave., storm sewer to drain part of Cleveland Ave., 23, 24, Myrtle Ave. $150,000-$175,000. $60,000 bond approved. J. Shisler, City Hall, engr.

★**O., Dayton**—Exten. sewer and water lines, sewage treatment plant addn. $1,600,000. Applied for WPA funds.